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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,326	01/09/2001	Sunderarajan G. Karaikurichi	31008.P031	5497
26181	7590	11/02/2004	EXAMINER	
FISH & RICHARDSON P.C. 3300 DAIN RAUSCHER PLAZA MINNEAPOLIS, MN 55402			KASENGE, CHARLES R	
			ART UNIT	PAPER NUMBER
			2125	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

OK

Office Action Summary

Application No.

09/757,326

Applicant(s)

KARAIKURICHI, SUNDERARAJAN
G.

Examiner

Charles R Kasenge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) #
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-9, 11-13, 15, 17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kleyman U.S. Patent 6,473,673. Referring to claims 1, 7, 11, 15, 17, and 19, Kleyman discloses a computer implemented method comprising: first translating a first plurality of representations of a plurality of parts of a plurality of sub-assemblies of an mechanical design assembly to a second plurality of representations of the pads of the sub-assemblies of the mechanical design assembly (col. 6, lines 21-44); and thereafter, translating one or more assembly constraints of said assembly by representations that are counterpart to geometric entities of said pre-translation representation constrained by said one or more assembly constraints (col. 3 and 9, lines 20-31 and 1-13). The Office interprets the master geometry representation as containing assembly constraints that interrelate the components, since Kleyman discloses the system having data that instructs how to combine geometric objects (col. 1, lines 13-23).

Referring to claims 2, 3, 8, 9, 12, and 13, Kleyman discloses the method of claim 1, wherein said translating of first representations of said parts of said sub-assemblies comprises tracking correspondence between said first and said second plurality of representations of said

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parts and sub-assemblies of the mechanical design assembly during said translation (col. 3, lines 32-39). Kleyman discloses the method of claim 1, wherein said translating of one or more assembly constraints comprises identifying said counterpart geometric entities within said translated representation (col. 6, lines 34-44).

Referring to claims 5 and 6, Kleyman discloses the method of claim 1, wherein said one or more assembly constraints comprise a selected one of a mating constraint and a flush constraint constraining on at least a first and a second sub-assembly/part of said first plurality of sub-assemblies/parts (col. 1, lines 18-23). Kleyman discloses the method of claim 1, wherein said one or more assembly constraints comprise a selected one of an angle constraint and a rotational constraint constraining on at least a first and a second sub-assembly/pad of said first plurality of sub-assemblies/pads (col. 1, lines 13-18). The Office interprets the master geometry, which includes constraints on relationships between parts, as containing mating and flush constraints.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 10, 14, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleyman as applied to claims 1, 7, 11, 15, 17, and 19 above, and further in view of Bolon et al. U.S. Patent 5,410,496. Kleyman discloses identifying geometric entities within said pre-

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translated representations constrained by said one or more assembly constraints (col. 6, lines 34-44). However Kleyman does not expressly disclose selecting a plurality of spatial sampling points. Bolon discloses selecting a plurality of spatial points for each part (col. 8, lines 54-62). Bolon also discloses mating/flush constraints (col. 6, lines 34-47) as well as angle/rotational constraints (col. 7, lines 19-27).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to specify and select spatial data for geometric elements. One of ordinary skill in the art would have been motivated to do this since Bolon discloses that doing so allows for a more descriptive representation of a geometric element, giving a more accurate CAD representation (col. 1, lines 23-38).

Conclusion

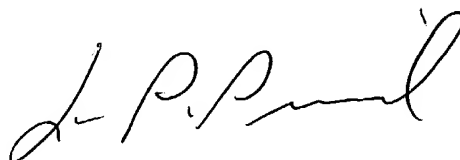
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles R Kasenge whose telephone number is 571 272-3743. The examiner can normally be reached on Monday through Friday, 8:30 - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CK
October 27, 2004

A handwritten signature in black ink, appearing to read "L. Picard", with a stylized flourish at the end.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100